(CMA) based on Time-and-Motion (TM) simulations designed to allow comparison of the complexity related to hGH preparation and administration. **METHODS:** Nurses naïve to hGH administration or similar drug-device combinations were recruited to evaluate four hGH pen devices via TM simulations. Five videotaped and timed trials for each product were evaluated based on four phases: 1) Learning (initial instructions for use); 2) Preparation (arranging device for use); 3) Administration (actual injection); and 4) Storage (provide for product viability between doses). The CMA applied costs related to parental opportunity costs categorized as wages (U.S. Bureau of Labor Statistics averages), drugs (First Databank WAC prices), and injection supplies. **RESULTS:** Two pen devices (Norditropin NordiFlex NNF, Norditropin NordiPen NNP) take less Total Time (<) to use than the comparators (Genotropin GTP < Humatrope Pen HTP, $p < 0.05$). Most time savings were directly related to differences in Learning ($p < 0.05$) and Preparation times ($p < 0.05$). Between the four hGH devices, the NNF/NNP pens appeared easier to learn to use than the HTP/GTP pen devices (NNF = NNP < HTP < GTP, $p < 0.05$) and were also easier to prepare for use (GTP < HTP, $p < 0.05$). User "learning curve" slopes decreased with practice ($p < 0.05$) over the five trials. Once any product was prepared for use, Administration and Storage times were nearly identical ($p > 0.05$). Parental time cost (opportunity cost) savings were greater in devices that were easier to Learn and Prepare for use (NNF 16% < NNP 24% < GTP 7% < HTP). Supplies costs were <1% of drug costs for all devices. **CONCLUSIONS:** Simulation-generated data demonstrated the value of multi-dimensional product-device analysis and revealed that NNF and NNP took less Total Time vs. comparators.

PDB34

ASSESSING DIFFERENCES IN UTILIZATION AND COSTS BETWEEN INSULIN DETEMIR (LEVEMIR®) AND INSULIN GLARGINE (LANTUS®) USERS

Borah B[1], Alemayehu B[2], Henk HJ[1], Forma FM[2]
[1]i3 Innovus, Eden Prairie, MN, USA, [2]Novo Nordisk, Inc, Princeton, NJ, USA

OBJECTIVE: To assess differences in overall and diabetes-related cost and utilization between diabetes patients treated with insulin detemir and insulin glargine. **METHODS:** Retrospective data analysis included commercial enrollees in a large US health plan with medical and pharmacy benefits. Patients were identified if their first prescription claim (index) for insulin detemir or insulin glargine occurred between May 1, 2006 and December 31, 2006. Eligible patients were required to have 6 months of continuous enrollment pre- and post-index date, no evidence of insulin detemir or insulin glargine use during pre-index and an A1C reading during the pre-index period. Primary outcomes include daily average consumption (DACON) of insulin detemir or insulin glargine and overall and diabetes-related cost. Differences in outcomes between insulin detemir and insulin glargine users were adjusted for baseline characteristics through generalized linear modeling (GLM). Propensity score matching was used to reduce selection bias between the two groups. **RESULTS:** There were 153 insulin detemir and 640 insulin glargine patients in the study, with no significant difference in age, gender and diabetes types between the two groups. Adjusted DACON for insulin detemir users was 34.3 units/day compared to 32.9 units/day for insulin glargine ($p = 0.51$). Adjusted diabetes-related pharmacy cost for insulin detemir users was higher than insulin glargine patients ($1467 vs. $1255; $p < 0.01$). However, adjusted diabetes-related medical cost for insulin glargine users was much higher compared to insulin detemir patients ($7497 vs. $6221; $p < 0.05$). No difference in overall pharmacy cost was observed. **CONCLUSION:** No significant difference in DACON between insulin detemir and insulin glargine users was observed. Although insulin detemir patients pay more for diabetes-related prescription medications, these costs were more than offset by significantly lower diabetes-related and overall medical costs.

PDB35

CLINICAL AND ECONOMIC CHARACTERISTICS OF PATIENTS WITH DIABETIC NEUROPATHY

Zhao Y, Ye W, Le TK, Boye KS, Holcombe J, Hall J, Swindle R
Eli Lilly and Company, Indianapolis, IN, USA

OBJECTIVE: To examine medical conditions associated with diabetic neuropathy (DN) and to identify drivers of health care charges and utilization using administrative claims database. **METHODS:** We studied commercially-insured individuals aged 18–64 with 24 months continuous enrollment in a national health plan. DN patients were identified by having ≥1 claim with a DN diagnosis between July 2004 and June 2005. Using propensity scoring, we selected a demographically-matched control cohort of patients with diabetes (10:1 ratio to DN). We compared disease prevalence, Year 2 distribution of charges, and reasons for ER visits and inpatient admissions between DN patients and controls. Logistic regression was used to assess the marginal contribution of DN to the most common reasons for ER and inpatient admissions controlling for differences in overall illness burden. **RESULTS:** Compared with controls (n = 86,550), DN patients (n = 8655) had more unique number of co-morbid medical conditions (9.7 vs. 6.8) and higher ($41,394 vs. $16,983) total medical charges. Both groups had the highest medical charges for inpatient services, followed by outpatient hospital and pharmacy use. Compared with controls, more DN patients had ER visits (13% vs. 9%), inpatient hospital encounters (28% vs. 13%), and longer hospitalizations (2.4 vs. 0.6 days). The top five reasons for ER visits were the same for both groups, with nonspecific backache being the most common. Three of the top five reasons for inpatient admissions were also the same: coronary atherosclerosis and other chronic ischemic heart disease, chest pain, and cellulitis. Controlling for excess illness burden, DN patients were still at a higher risk for hospitalizations due to chest pain, heart failure, and cellulitis. **CONCLUSION:** DN patients had significantly more co-morbid medical conditions, ER visits, inpatient admissions, and longer hospitalizations than age-and-sex matched controls.

PDB36

HEALTH SERVICE COSTS AND RESOURCE UTILIZATION AMONG MANAGED CARE ENROLLEES WITH GOUT AND RENAL DISEASE

Riedel AA[1], Fuldeore MJ[2], Braun BB[3], Krishnan E[4]
[1]i3Innovus, Eden Prairie, MN, USA, [2]TAP Pharmaceuticals Products Inc, Lakeforest, IL, USA, [3]i3 Innovus, Eden Prairie, MN, USA, [4]University of Pittsburgh, Pitttsburgh, PA, USA

OBJECTIVE: To examine health care expenditures and utilization among gout patients by severity of renal disease. **METHODS:** A retrospective claims analysis using commercial enrollees in a U.S. health plan age ≥18, treated with pharmaceuticals for incident gout between Janaury 1, 2002 and December 31, 2005, without cancer. Annual health service costs and utilization were compared by severity of renal disease (using a claims-based algorithm) with descriptive analysis and generalized linear modeling (GLM). **RESULTS:** Renal disease was evident in 745 (9%) of 8039 sub-